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<b>PRE-APPEAL BRIEF REQUEST FOR REVIEW</b>		Docket Number (Optional) 8540G-000083/COB	
I hereby certify that this correspondence is being electronically filed.		Application Number 10/791,428	
On February 12, 2010		Filed March 2, 2004	
Signature <u>Stephanie Stevens</u>		First Named Inventor William S. Wheat	
Typed or printed name Stephanie Stevens		Art Unit 1795	
		Examiner Cynthia K. Lee	

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

\_\_\_\_\_

This request is being filed with a notice of appeal.

  X  

The review is requested for the reason(s) stated on the attached sheet(s).  
Note: No more than five (5) pages may be provided.


I am the

☐ applicant/inventor

☐ assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☐ attorney or agent of record.  
Registration number \_\_\_\_\_

☒ attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34 34,754

  
 Signature  
 Michael D. Wiggins  
 Typed or printed name  
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 February 12, 2010  
 Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☐ \*Total of \_\_\_\_\_ forms are submitted.

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: 10/791,428  
Filing Date: March 2, 2004  
Applicant: William S. Wheat  
Group Art Unit: 1795  
Examiner: Cynthia K. Lee  
Title: FUEL CELL ENERGY MANAGEMENT SYSTEM FOR  
COLD ENVIRONMENTS  
Attorney Docket: 8540G-000083/COB

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Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Sir:

Applicants request a Pre-Appeal Brief Conference in response to clear legal and factual deficiencies in the Final Office Action mailed December 14, 2009 and in the Advisory Action mailed January 29, 2009. Applicant reserves the right to address additional matters in any subsequent appeal brief.

### **STATUS OF CLAIMS**

Claims 23, 24, and 26 are rejected under 35 U.S.C. § 102(b) as being anticipated by Mufford (U.S. Pat. No. 6,186,254). Claim 25 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Mufford in view of Nakanishi (U.S. Pat. No. 6,592,741). Claim 29 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Mufford in view of Wells (U.S. Pat. App. No. 2004/0192467). Claims 27-28, 30-34, and 47-54 are allowed.

### **SUMMARY OF CLAIMED SUBJECT MATTER**

Independent claim 23 describes an energy management system for controlling the temperature of a fuel cell system of a vehicle. The energy management system comprises a fuel cell stack, an air supply, a water supply, a hydrogen supply, a heater, and a controller.

The heater is connected to an output of the fuel cell stack and is arranged to warm the fuel cell stack and the water supply. The heater is external to the fuel cell stack. The controller controls the hydrogen supply and the air supply to power the heater while the vehicle is not running. Powering the heater while the vehicle is not running warms the fuel cell stack and the water supply.

### **ARGUMENT**

With respect to claim 23, as previously asserted by Applicants in Applicants' Pre-Appeal Brief of March 31, 2009, Mufford fails to disclose a controller that controls a hydrogen supply and an air supply to power a heater to warm a fuel cell stack and a water supply **while a vehicle is not running**. Pursuant to the Pre-Appeal Conference

held at Applicants' request, the Examiner acknowledges Mufford's failure to teach this limitation. (See Page 2 of the Non-Final Office Action of June 22, 2009).

Since the Pre-Appeal Conference, however, the Examiner refuses to afford the limitations of the controller of claim 23 any patentable weight. (See Page 2, lines 8-9 of the Non-Final Office Action of June 22, 2009). More specifically, the Examiner refuses to afford any weight to the limitation of controlling a hydrogen supply and an air supply to power a heater to warm a fuel cell stack and a water supply while a vehicle is not running. (See Page 2, lines 13-14 of the Non-Final Office Action of June 22, 2009).

Applicants note that Mufford only describes operating a fuel cell for warming while the vehicle of Mufford **is running** – not while the vehicle is not running as claim 23 recites. For example, Mufford states that “[f]uel cell power may be advantageously used to power the resistor soon after start-up . . . .” (See column 4, lines 39-40). Mufford also states that fuel cell power may be used “**during operation . . . especially when the motor vehicle is operated** in cool ambient temperatures.” (See column 4, lines 42-46) (emphasis added). However, Mufford is **silent** as to the fuel cell 30 supplying power while the vehicle is not running as claim 23 explicitly recites.

Mufford therefore fails to expressly disclose a controller that controls a hydrogen supply and an air supply to power a heater to warm a fuel cell stack and a water supply while a vehicle is not running. The Examiner acknowledges that the Examiner's position is not based on inherency. (See last paragraph of the Continuation Sheet of the Advisory Action of January 29, 2010). Applicants note that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Verdegaal Bros. v. Union Oil Co. of

California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); M.P.E.P. § 2131.

Here, Mufford does not expressly or inherently disclose a controller according to the limitations of claim 23. Therefore, the rejection is improper and should be withdrawn.

The Examiner alleges that the limitation of controlling a hydrogen supply and an air supply to power a heater to warm a fuel cell stack and a water supply while a vehicle is not running is a statement of intended or desired use. (See third paragraph of the Continuation Sheet of the Advisory Action of January 29, 2010). The Examiner takes the position that “[i]f the prior art structure is capable of performing the intended use, then it meets the claim.” (See fifth paragraph of the Continuation Sheet of the Advisory Action of January 29, 2010).

The limitation of controlling a hydrogen supply and an air supply to power a heater to warm a fuel cell stack and a water supply while a vehicle is not running is a **functional limitation** of the controller of claim 23 - not an intended or desired use. M.P.E.P. § 2173.05(g) expressly states that “there is nothing inherently wrong with defining some part of an invention in functional terms.”

M.P.E.P. § 2173.05(g) explains that “[a] functional limitation is often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step.” In claim 23, the limitation of controlling a hydrogen supply and an air supply to power a heater to warm a fuel cell stack and a water supply while a vehicle is not running is a particular capability or purpose that is served by the controller.

M.P.E.P. § 2173.05(g) also states that “[a] functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a

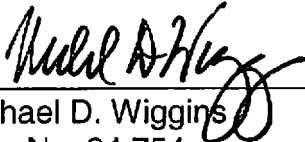
person of ordinary skill in the pertinent art in the context in which it is used." Applicants respectfully submit that one of ordinary skill in the art would understand the functional limitations of claim 23 impart structural limitations upon the controller of claim 23. More specifically, the structure of the controller of claim 23 is such that the controller controls a hydrogen supply and an air supply to power a heater to warm a fuel cell stack and a water supply while a vehicle is not running. The Examiner's refusal to afford the limitations of claim 23 any weight is therefore improper.

For at least the above reasons, Applicant respectfully asserts that claim 23 is allowable. The remaining claims depend from claim 23 and, therefore, are allowable for at least similar reasons.

HARNESS, DICKEY, & PIERCE, P.L.C.

Dated: February 12, 2010

By:

  
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